# A Case of Graves' Thyroiditis followed by Infective Hypopituitarism

**P. Gogineni**[1], **I. Sirisena**[1, 2]

1 Temple University Hospital, Philadelphia, PA

2 Lewis Katz School of Medicine at Temple University, Philadelphia, PA

PREETHI.GOGINENI@TUHS.TEMPLE.EDU

## INTRODUCTION

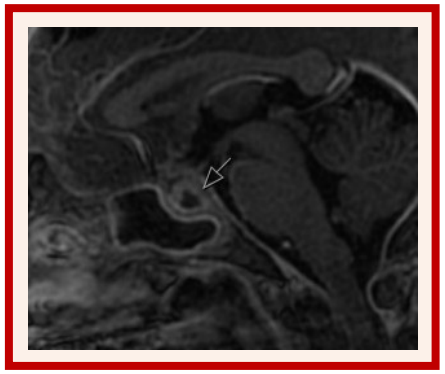
We present a case of uncontrolled Graves' hyperthyroidism complicated by agranulocytosis ultimately requiring thyroidectomy and the subsequent occurrence of hypopituitarism due to meningeal infection.

## CASE DESCRIPTION

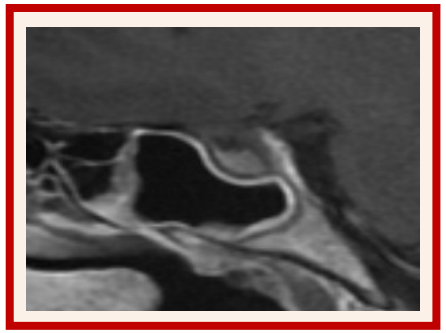
- 31 year old F with PMH of depression presents with complaints of nausea, palpitations, tremor, weight loss, heat intolerance, and shortness of breath.
- Exam pertinent for lid lag, proptosis, and thyromegaly with no palpable nodules.
- Thyroid function tests were consistent with uncontrolled hyperthyroidism and ultrasound with diffusely increased vascularity.
- Methimazole not tolerated due to agranulocytosis and thyroidectomy was performed and patient discharged on levothyroxine.
- Nine days following thyroidectomy patient readmitted with sepsis likely due to bacterial meningitis thought to be due to an oral source.
- Acute Streptococcal meningitis was diagnosed and hospital course was further complicated by sellar abscess and sphenoid osteomyelitis/abscess noted on imaging.
- Dental extractions and endoscopic sinus drainage was performed along with intravenous antibiotics.
- No clinical or biochemical signs of diabetes insipidus were noted.
- Patient was started on hydrocortisone and she completed a full course of antibiotic therapy for meningitis.

## RESULTS

*Initial MRI*



*Post Treatment*



Follow-up MRI approximately one month from injury shows interval resolution of intrasellar/pituitary abscess and improvement of osteomyelitis of posteroinferior wall of the sella.

**Notable Labs**

| | At Presentation | 6 months Post-Treatment |
|---|---|---|
| **LH** (0.5 - 76 m[iU]/mL) | **0.3** | **2.5** |
| **FSH** (1.5 -33.4 m[iU]/nL) | **2.2** | **2.7** |
| **Estradiol** (pg/mL) | **<15** | **155** |
| **Prolactin** (2-8 - 29.2 ng/mL) | **0.8** | **8.1** |
| **IGF-1** (53 - 331 ng/mL) | **65** | **243** |
| **AM Cortisol** (ug/dL} | **0.90** | **7.7** |
| **TSH** (0.4 - 4.5 m{iU]/L) | **<0.005** | **8.69** |
| **Free T4** (0.89 – 1.76 ng/dL) | **0.84** | **1.1** |

## DISCUSSION

- Infections of the hypothalamic pituitary region are rare and account for less than one percent of all pituitary lesions.
- Risk factors include meningitis, paranasal sinusitis, head/neck surgery, and an immunocompromised host.
- Symptoms and deficiencies can range from isolated pituitary hormones to panhypopituitarism.
- In the majority of reported cases, endocrine dysfunction has been irreversible and, should recovery occur, one needs to monitor for inflammation, bleeding and infarction as recurrence is possible.
- In our patient, endocrine dysfunction improved with treatment of infectious etiology.
- Repeat MRI will be done to document stability.

## REFERENCES

Gao L, et al. Pituitary. 2017 Apr;20(2):189-194.

Liu F et al. Clin Endocrinol (Oxf). 2011 Jan;74(1):79-88.